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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,282	06/20/2003	Harold Keith Crain	120697	6344

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Suite 2600  
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St. Louis, MO 63102

EXAMINER
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AFZALI, SARANG

ART UNIT	PAPER NUMBER
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3726

MAIL DATE	DELIVERY MODE
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08/13/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/600,282

Applicant(s)

CRAIN ET AL.

Examiner

Sarang Afzali

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The applicant's amendment filed on 06/04/2007 has been fully considered and made of record.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Umemura et al. (US 5,871,234).

As applied to claim 11, Umemura et al. teach a tool (1, Fig. 1) including:

a blade engagement end (annular ring core bar 3, Fig. 1) configured to engage the plurality of rotor blades between the rotor disc and the radially outer blade tip, said blade engagement end comprising an engagement top surface;

at least one brace (first diagonal set of spoke core bars 5 and 8 from top right to bottom left, Fig. 1) coupled to the blade engagement end (annular ring core bar 3, Fig. 1) at a first end of the at least one brace;

at least one handle (second diagonal set of spoke core bars 5 and 8 from top left to bottom right, Fig. 1) coupled to said at least one brace (first diagonal set of core bars 5 and 8) at a predetermined angle to facilitate inducing an axial force to the plurality of rotor blades; and

a guide end (boss core bar 4, Figs. 1 & 5) coupled to a second end of the at least one brace, said guide end comprising a body including a guide end top surface positioned above said engagement top surface.

Note that Umemura et al. tool only needs to engage more than one rotor blade in order to meet the claim limitation of "plurality of rotor blades" and it is clear that, if needed, one may be able to manipulate the tool of Umemura et al. by holding it in an angle and/or different orientation in order to engage at least couple of rotor blades, if not more.

As applied to claim 12, Umemura teach blade engagement end (annular ring core bar 3, Fig. 1) has a circular cross-section.

As applied to claim 13, Umemura et al. teach the blade engagement end (annular ring core bar 3, Fig. 1) comprising a body including a central opening extending therethrough, said body comprising an engagement face configured to contact each of the plurality of blades between the dovetails and the mid-span dampers during a blade installation process (Figs. 1 & 5).

As applied to claim 14, Umemura et al. teach blade engagement end (annular ring core bar 3, Fig. 1) includes a pad (synthetic resin layers 14, Fig. 1, col. 4, lines 13-16) coupled to the engagement face.

As applied to claim 15, Umemura et al. teach pads (synthetic resin layers 14) have second hardness number.

As applied to claim 16, Umemura et al. teach the engagement end (annular ring core bar 3, Fig. 1) has a first rifled engagement side configured to conform to what it needs to install.

As applied to claim 17, Umemura et al. teach that at least one brace (spoke core bars 5 and 8, Fig. 1) is configured to maintain the engagement end (annular ring core bar 3, Fig. 1) in alignment with guide end (boss core bar 4, Figs. 1 & 5) during the installation process.

As applied to claim 18, Umemura et al. teach the guide end (boss core bar 4, Figs. 1 & 5) has a body that includes a central opening therethrough sized to receive a guide shaft (shaft 40, Fig. 5) therethrough.

As applied to claim 19, Umemura et al. teach the guide end (boss core bar 4, Figs. 1 & 5) and guide shaft (shaft 40, Fig. 5) are slidingly coupled to each other.

As applied to claim 20, Umemura et al. teach the tool (1, Fig. 1) is capable of being manually rotated during installation by means of the handle (second diagonal set of spoke core bars 5 and 8 from top left to bottom right, Fig. 1).

Note that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Thus, Umemura et al. is capable of performing the intended use and therefore meet the claimed invention.

***Response to Arguments***

4. Applicant's arguments filed on 06/04/2007 have been fully considered but they are not persuasive.
5. As for claim 11, rejected under 35 USC 102(b) as anticipated by Umemura et al. in an office action mailed on 04/18/2007, Applicant argues two major points. First that "The steering wheel in Umemura absorbs a forward force by deforming at a plurality of portions. As such, if the steering wheel of Umemura were used to couple rotor blades to a rotor disc, the steering wheel would deform to absorb the applied axial force required to couple the blades to the disc, rather than facilitate inducing an axial force to a plurality of rotor blades, as required by the claimed invention ("Remarks", page 1, paragraph 5, lines 7-11) and that "Umemura et al. does not describe nor suggest a rotor blade installation tool that includes at least one handle coupled to at least one brace at a predetermined angle to facilitate inducing an axial force to plurality of rotor blades"("Remarks", page 2, paragraph 2, lines 3-5).

The Examiner respectfully disagrees with the above arguments.

Note that nowhere in the disclosure the Applicant is discussing the required axial force and as such the tool of Umemura et al. can facilitate inducing an axial force to the plurality of rotor blades. Note that the tool of Umemura et al. is rigid enough and can be subjected to many forces and pressures without deformation.

As for the handle, Umemura et al. teach both the brace and handle (see rejection of claim 11, paragraph 3 above) as it is clear one can easily utilize the handle of

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Umemura et al. tool to assist a manual rotation of the tool during the installation process.

Once again note that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Thus, Umemura et al. is capable of performing the intended use and therefore meet the claimed invention.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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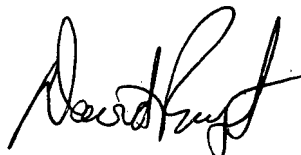
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarang Afzali whose telephone number is 571-272-8412. The examiner can normally be reached on 7:00-3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SA  
8/1/2007



DAVID P. BRYANT  
SUPERVISORY PATENT EXAMINER

8/3/07